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ACCOUNT NO. 23-C975

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Toshihiro WAKAYAMA

: Attn: APPLICATION BRANCH

Serial No. NEW

: Docket No. 2001_0284A

Filed March 20, 2001

A SYSTEM FOR MANAGING NETWORKED
INFORMATION CONTENTS

PRELIMINARY AMENDMENT TO REDUCE PTO FILING FEE

Assistant Commissioner for Patents,
Washington, DC 20231

Sir:

Please amend the above-identified application as follows.

In the Claims:

Kindly amend claims 4, 8, 11, and 15 as follows.

4. (Amended) The computer-implemented system according to claim 1, wherein the representation of said dependency relationships comprises:

unique identifiers for active elements, i.e., elements involved in dependency relationships, where the uniqueness is ensured by values of a designated attribute, called content variables, uniquely assigned to those active elements, or by an equivalent means; and

dependency expressions written in Web-standard languages such as XML (Extensible Markup Language) and MathML (Mathematical Markup Language), using element identifiers such as content variables.

8. (Amended) The computer-implemented system according to claim 1, further comprising a dependency structure analysis module, which:

given a set of updated active elements, identifies its update candidate set, which contains all active elements, or corresponding content variables, which depend on some active elements in the given set;

determines the presence or absence of cyclic dependencies among active elements in Web documents in the content net.

11. (Amended) The computer-implemented system according to claim 9, further comprising:

a station, namely a browser-based presentation of a Web document representing information contents in a content net, as a collection of ports for information interchange, or a port complex, over the Web; and

a station net, namely a collection of stations networked over the Web and accessible to human users in the Web environment, where each station in the collection is derived from a Web document representing information contents in a designated content net.

15. (Amended) The computer-implemented system according to claim 12, wherein content variables, or corresponding elements, of a content file map to ports of the station corresponding to the content file respecting the following constraints:

an internal reference port is associated with a set of content variables which depend on other content variables via functional dependency clauses;

an initial port is associated with a set of free variables;

an external reference port is associated with a single free variable; and

a local port is associated with the set of all non-active elements which are not sub-elements of an active element.

Kindly add new claims 17-27 as follows.

17. (New) The computer-implemented system according to claim 2, wherein the representation of said dependency relationships comprises:

unique identifiers for active elements, i.e., elements involved in dependency relationships, where the uniqueness is ensured by values of a designated attribute, called content variables, uniquely assigned to those active elements, or by an equivalent means; and

dependency expressions written in Web-standard languages such as XML (Extensible Markup Language) and MathML (Mathematical Markup Language), using element identifiers such as content variables.

18. (New) The computer-implemented system according to claim 3, wherein the representation of said dependency relationships comprises:

unique identifiers for active elements, i.e., elements involved in dependency relationships, where the uniqueness is ensured by values of a designated attribute, called content variables, uniquely assigned to those active elements, or by an equivalent means; and

dependency expressions written in Web-standard languages such as XML (Extensible Markup Language) and MathML (Mathematical Markup Language), using element identifiers such as content variables.

19. (New) The computer-implemented system according to claim 2, further comprising a dependency structure analysis module, which:

given a set of updated active elements, identifies its update candidate set, which contains all active elements, or corresponding content variables, which depend on some active elements in the given set;

determines the presence or absence of cyclic dependencies among active elements in Web documents in the content net.

20. (New) The computer-implemented system according to claim 3, further comprising a dependency structure analysis module, which:

given a set of updated active elements, identifies its update candidate set, which contains all active elements, or corresponding content variables, which depend on some active elements in the given set;

determines the presence or absence of cyclic dependencies among active elements in Web documents in the content net.

21. (New) The computer-implemented system according to claim 4, further comprising a dependency structure analysis module, which:

given a set of updated active elements, identifies its update candidate set, which contains all active elements, or corresponding content variables, which depend on some active elements in the given set;

determines the presence or absence of cyclic dependencies among active elements in Web documents in the content net.

22. (New) The computer-implemented system according to claim 5, further comprising a dependency structure analysis module, which:

given a set of updated active elements, identifies its update candidate set, which contains all active elements, or corresponding content variables, which depend on some active elements in the given set;

determines the presence or absence of cyclic dependencies among active elements in Web documents in the content net.

23. (New) The computer-implemented system according to claim 6, further comprising a dependency structure analysis module, which:

given a set of updated active elements, identifies its update candidate set, which contains all active elements, or corresponding content variables, which depend on some active elements in the given set;

determines the presence or absence of cyclic dependencies among active elements in Web documents in the content net.

24. (New) The computer-implemented system according to claim 7, further comprising a dependency structure analysis module, which:

given a set of updated active elements, identifies its update candidate set, which contains all active elements, or corresponding content variables, which depend on some active elements in the given set;

determines the presence or absence of cyclic dependencies among active elements in Web documents in the content net.

25. (New) The computer-implemented system according to claim 10, further comprising:

a station, namely a browser-based presentation of a Web document representing information contents in a content net, as a collection of ports for information interchange, or a port complex, over the Web; and

a station net, namely a collection of stations networked over the Web and accessible to human users in the Web environment, where each station in the collection is derived from a Web document representing information contents in a designated content net.

26. (New) The computer-implemented system according to claim 13, wherein content variables, or corresponding elements, of a content file map to ports of the station corresponding to the content file respecting the following constraints:

an internal reference port is associated with a set of content variables which depend on other content variables via functional dependency clauses;

an initial port is associated with a set of free variables;

an external reference port is associated with a single free variable; and

a local port is associated with the set of all non-active elements which are not sub-elements of an active element.

27. (New) The computer-implemented system according to claim 14, wherein content variables, or corresponding elements, of a content file map to ports of the station corresponding to the content file respecting the following constraints:

an internal reference port is associated with a set of content variables which depend on other content variables via functional dependency clauses;

an initial port is associated with a set of free variables;

an external reference port is associated with a single free variable; and

a local port is associated with the set of all non-active elements which are not sub-elements of an active element.

REMARKS

The above claim amendments are presented in order to remove multiple claim dependencies, so as to reduce the required filing fee.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "Version with markings to show changes made."

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

4. (Amended) The computer-implemented system according to claim 1, [2 or 3,] wherein the representation of said dependency relationships comprises:

unique identifiers for active elements, i.e., elements involved in dependency relationships, where the uniqueness is ensured by values of a designated attribute, called content variables, uniquely assigned to those active elements, or by an equivalent means; and

dependency expressions written in Web-standard languages such as XML (Extensible Markup Language) and MathML (Mathematical Markup Language), using element identifiers such as content variables.

8. (Amended) The computer-implemented system according to [any claim from claim 1 through claim 7] claim 1, further comprising a dependency structure analysis module, which:

given a set of updated active elements, identifies its update candidate set, which contains all active elements, or corresponding content variables, which depend on some active elements in the given set;

determines the presence or absence of cyclic dependencies among active elements in Web documents in the content net.

11. (Amended) The computer-implemented system according to claim 9 [or 10], further comprising:

a station, namely a browser-based presentation of a Web document representing information contents in a content net, as a collection of ports for information interchange, or a port complex, over the Web; and

a station net, namely a collection of stations networked over the Web and accessible to human users in the Web environment, where each station in the collection is derived from a Web document representing information contents in a designated content net.

15. (Amended) The computer-implemented system according to claim 12, [13 or 14,] wherein content variables, or corresponding elements, of a content file map to ports of the station corresponding to the content file respecting the following constraints:

- an internal reference port is associated with a set of content variables which depend on other content variables via functional dependency clauses;
- an initial port is associated with a set of free variables;
- an external reference port is associated with a single free variable; and
- a local port is associated with the set of all non-active elements which are not sub-elements of an active element.